Western Refining
YORKTOWN

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December 29, 2009

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Director Air Enforcement
Office of Regulatory Enforcement
U.S. Environmental Protection Agency
Mail Code 2242-A, Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460-0001

Re: Northern District of Indiana, Hammond Division
Civil action No. 2:96 CV 095 RL
Western Refining Yorktown, Inc.
Paragraph 15: Annual Heater and Boiler Update
and Schedule for Installation of NOx Controls

For Information Only – No EPA Action Required

Dear Madam or Sir:

Attached please find the **2009 Annual Heater and Boiler Update** for the Western Refining Yorktown, Inc. ("Western"), submitted pursuant to Paragraph 15.H.iii of the above captioned Consent Decree (as amended).

Per our commitment in our 2008 Annual Heater and Boiler Update submitted on December 22, 2008, during 2009, Western completed an engineering evaluation of the three compliance Options identified in that submittal. During the course of this review, Western determined that an incorrect emission factor had been used in the baseline emission estimates contained in Appendix A. Specifically, the AP-42 factor for heaters/ boilers with <100 MMBTU/hr firing capacity (0.10 lb/MMBTU) was applied to the Crude Furnace (B-101) and the Utility Boilers (B-1701A & B), which have all have firing capacities > 100 MMBTU/hr. Therefore, per the requirements of Paragraph 15.H.iii, an updated Appendix A is provided. The revised emissions for the Crude Furnace (B-101) and the Utility Boilers (B-1701A & B) provided in this update are based on the AP-42 factor for heaters / boilers with firing capacities >100 MMBTU/hr (0.017 lb/MMBTU) and 1999 actual firing rates.

The results of Western's evaluation of the three (3) Options presented in our 2008 Annual Updates are as follows:

Option 1 – Retrofit the Crude Furnace (B-101) with Ultra-Low NOx Burners (ULNB's)

- As indicated in our 2008 submittal, the furnace configuration and firebox gas flow patterns at the crude furnace (B-101) caused significant concerns as to whether ULNB burners would operate properly in this unit. Despite these initial concerns, in 2009, Western performed a more detailed evaluation with burner manufacturers, and was ultimately advised by those vendors that they would not guarantee the burner

performance in this application. Thus Western believes that the retrofit of this furnace to achieve the required NOx reductions is technically infeasible.

- Western also performed a preliminary engineering evaluation associated with a project to potentially upgrade the Crude and Coker units to facilitate the processing of heavier crudes. The scope of this project included furnace modifications and upgrades that would not only achieve the desired business objectives, but also would provide the required NOx reductions. Due to the current poor economic conditions, this project was cancelled.

Option 2 – Retrofit the Utility Boilers (B1701A &B) with ULNB's or Replace with New Boilers

- As described in our 2008 Annual Update, engineering work revealed that the boilers would need to be de-rated by 20% in order to meet the required NOx emission rate, and that reduction in capacity would have the potential to cause operational, safety, and environmental issues. Additionally, the cost of the installation would be high considering the projected life of the existing boilers and the cost of replacement with new boilers. Therefore, retrofit of the existing boilers with ultra-low NOx burners was deemed to be technically infeasible.
- In 2009, Western performed initial engineering work to evaluate the replacement of the boilers, as such replacement would not only provide the required NOx reduction, but might also provide the refinery with additional business and environmental benefits. Based on the initial work, the cost of replacement of the boilers was estimated to be $15,000,000. Due the current poor economic climate, Western is unable to commit to this major capital project at this time.
- Prior to making a final decision regarding this option, Western wishes to perform further evaluation of potential leasing options to determine whether such an approach to boiler replacement might be economically feasible. It is our intent to complete this evaluation in 2010.

Option 3 – Retrofit BA-101 (DCU), B-102 (Vacuum Furnace), F-303 (Ultra), and F-101 (DDU)

- The retrofit of these four heaters with ULNB's is technically feasible and the designed controls will satisfy the NOx reduction requirements of the Consent Decree. As part of the implementation of this option, a NOx CEMS would be installed at the BA-101 (DCU) furnace, pursuant to Paragraph 15.I. The total estimated cost of this effort will be $4,700,000. Currently, the next regularly scheduled outages of the units, when Western could complete the installation of NOx controls, are tentatively scheduled as shown below. Please note that, due to business needs, outage schedules are subject to change.

Heater	Unit	Next TAR (Tentative)
BA-101 (DCU)	Coker	2011
F-101 (DDU)	DDU	2012
F-303 (Ultra)	Ultra	2012
B-102 (Vacuum Furnace)	Crude	2013

As EPA is aware, Western assumed ownership of the refinery in June 2007, and at the time of acquisition, NOx controls had not yet been installed on any heaters or boilers. Since the time of the acquisition, Western has completed the installation of controls on one furnace. Furthermore, Western has reviewed the NOx compliance proposals submitted by prior owners and has determined that, due to the configuration and age of the heaters and boilers, the two retrofitting control technologies previously proposed were technically infeasible. Western has worked diligently to evaluate other potential NOx reduction options to achieve the total level of controls required by the Consent Decree and has selected two potential options, both of which fulfill the requirements of the Consent Decree. Because Option 2 provides additional environmental and operational benefits as compared to Option 3, prior to making our final selection of a NOx control option, Western intends to further evaluate the possibility of utilizing leased equipment to execute Option 2. We are committed to completing this review in 2010. Western believes this approach is reasonable and consistent with the intent of the Consent Decree.

Should you have any questions regarding this information, please contact Jane Kelley, Environmental Manager at (757) 898-9732.

Sincerely,

John A. Rossi
Vice President, Yorktown Refinery

Attachment

cc:

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